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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/877,921	06/07/2001	Daniel T. Moriarty	2675.1006-000	2511

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INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER	
NGUYEN, TUAN N	

ART UNIT	PAPER NUMBER
2828	

DATE MAILED: 07/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/877,921	MORIARTY ET AL.	
	Examiner	Art Unit	
	Tuan N Nguyen	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Paul Ip

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Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

The following IDS were not available for examination; Applicant requires to submit the following documentation for examination.

a) VCB series Optical Attenuators, The JDS Uniphase Site, February 13, 2001.
b) Variable Optical Attenuator, Nortel Networks, Preliminary Data Sheet, Feb 1, 1999.
c) 10Gb/s Data Modulator w/ Integrated VOA, the JDS Uniphase Site, Feb. 13, 2001.
d) 10Gbits/s Lithium Niobate Electro-Optic Modulator, Lucent Technologies Data Sheet, Nov. 2000.
e) ADN2841 Dual Loop 155Mbps to 2.7Gbps Laser Diode Drive, Analog Devices, August 2001.

Double Patenting

1. Claims 1-4,6-9, 11, and 13-18 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,3-5, 7-10, 12 and 13 of copending Application No. 10/163, 098, respectively. Although the conflicting claims are not identical, they are not patentably distinct from each other because both set of claims reciting a control circuit for laser diode comprising a laser diode, a wavelength control, and a power controller having a bias current source, a power monitor loop, a power control signal,.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-19 are rejected under 35 U.S.C 112, second paragraph, as being indefinite, vague, and confusing for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, **for example**.

Claim 1 recites a control circuit for laser diode comprising a *power controller*, and *a wavelength controller*. It is not clear what power controller and wavelength controller made of to perform the adjusting of bias current, or what means use to compensate for the wavelength shift. There is insufficient means, structure and functional relationship to conform a control circuit. Claims 2-5 are rejected base on the same reason.

Claim 6 recites a laser transmitter comprising a laser diode, a modulator modulating output to diode, and a control circuit comprising a power controller, and a wavelength controller. There is insufficient means, structure and functional relationship between the elements to conform a laser transmitter. Claims 7-10 are rejected base on the same reason.

Claim 11 recites a method for controlling a laser diode by *adjusting a bias current* to laser diode, *compensating power controller....* There is no means to perform adjusting or

compensating, and there is insufficient structure and functional relationship to perform a method for controlling a laser diode. Claims 12-14 are rejected base on the same reason.

Claim 15 recites a control circuit for laser diode comprising *means for adjusting* a bias current to the laser diode, *means for compensating* for the wavelength shift... There is insufficient means, structure and functional relationship to conform a control circuit for a laser diode (*means of performing only encompass one element – the means here encompass multiple elements*). Claims 16-19 are rejected base on the same reason.

Claim Rejections - 35 USC § 102

4. The following is a quotation of 35 U.S.C. 102(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-4, 6-9, 11-18 are rejected under 35 U.S.C. 102(a) as being unpatentable over Prior Art Figure 1 or Solina et al. (US 5530712).

With respect to claims 1, 6, 11, 15 Applicant Figure 1 (PRIOR ART) and Solina et al. '712 show a circuit for a laser diode and a laser transmitter comprising a laser diode, a modulator, a power controller for adjusting bias current to laser diode, and a wavelength controller for compensating for wavelength shift; Fig 1 also shows the means for adjusting the bias current to laser diode and means for compensating for the wavelength shift. Since claim 11 recites the same or identical elements/limitations it is inherent to use (PRIOR ART) and Solina '712 to recite the method of controlling a laser diode, product by process.

With respect to claims 2, 7, 12, 16 Fig 1 (PRIOR ART) shows the power controller comprises a bias current source (F1: 14), a power monitor loop (F1: 22), and a power control signal added to provide a power adjust signal, where bias current source adjust bias current responsive to difference between power reference voltage and power adjust signal (F1: Vref, 40). thermoelectric element, a temperature monitor loop, a wavelength compensation signal added to the temperature monitor signal (Vtemp).

With respect to claims 3, 8, 13, 17 Fig 1 (PRIOR ART) shows the wavelength controller comprises a temperature control circuit that provides a control current to a thermoelectric element, a temperature monitor loop include a temperature sensor, a wavelength compensation signal wherein thermoelectric element responsive to a difference between reference voltage input and wavelength control signal (F1: 26, 27, Vtemp).

With respect to claims 4, 9, 14, 18, it is inherent that the wavelength compensation signal is proportional to power control signal (for any given value P=VI will proportionally relative with one another).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or non-obviousness.

7. Claims 5, 10, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figure 1 or Solina et al. (US 5530712) in view of Anderson (US 6282218).

With respect to claims 5, 10, 19 Applicant own admission and Solina et al. '712, disclose the above, except the etalon element. Anderson '218 discloses the use of etalon element for feedback control in laser wavelength control circuit (ABSTRACT, Col 1: 25-55). It would have been obvious to one of ordinary skill in the art to provide the etalon element for feedback control as taught or suggested by Anderson ('218), for the feedback control.

Citation of Pertinent References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is cited primarily to show the product of the instant invention.

Ogino (US005285464A), Taguchi (US005097473A), Carl (US005309458A), Ikeda (US005966395A), Ashkeboussi et al. (US006226114B1), Hwang (US005881081A), Grodevant (US 5666045), Oono et al. (US005761230A), Taguchi (US006320890B1), Kobayashi (US006192060B1), Morita et al. (US006091747A), Ikeda (US005966395A), Howie et al. (US

4345330), Albanese (US 4081670), Ikeuchi et al. (US005563898A) discloses control circuit for optical transmission.

Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (703) 605-0756. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

Tuan N. Nguyen

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